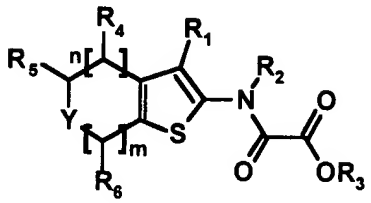
IN THE CLAIMS:

Claims 1-109 are cancelled.

110. (currently amended) A compound of Formula 1



Formula 1

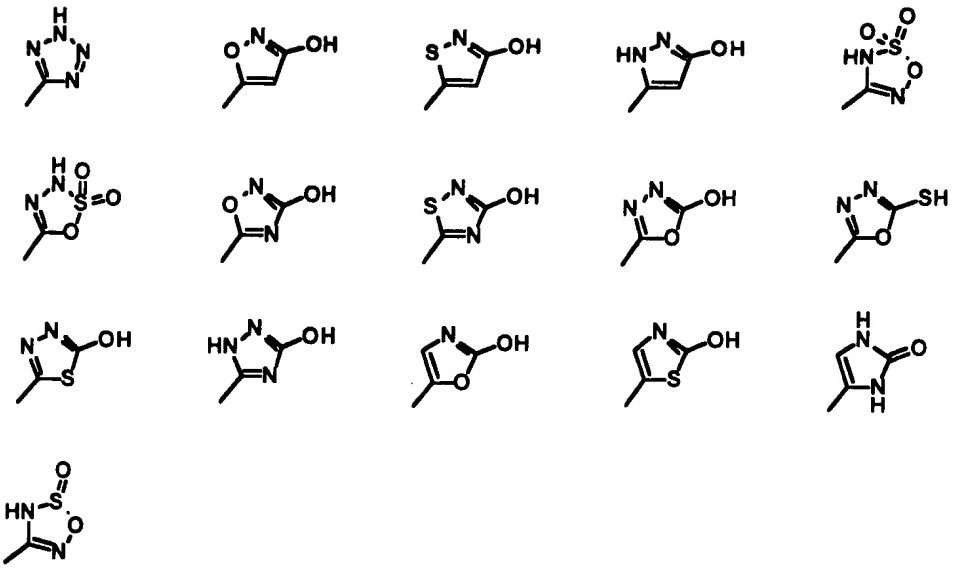
wherein

n is 1 or 2;

m is 1 or 2;

Y is O, ~~S,~~ SO or SO_2;

R_1 is COOH, $COOC_1$-C_6alkyl, $COOarylC_1$-C_6alkyl, $COOC_1$-C_6alkylcarbonyloxyC_1-C_6alkyl, $COOC_1$-C_6alkylcarbonyloxyarylC_1-C_6alkyl or a 5-membered heterocycles selected from the group consisting of:



R_2 is hydrogen;

R_3 is hydrogen, C_1-C_6alkyl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyloxyC_1-C_6alkyl or C_1-C_6alkylcarbonyloxyarylC_1-C_6alkyl;

R_4 is hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined below;

~~R_5 and R_6, are independently~~is hydrogen, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxycarbonyl, aryloxycarbonyl, arylC_1-C_6alkyloxycarbonyl, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxyC_1-C_6alkyl, arylC_1-C_6alkyloxyC_1-C_6-alkyl, NR_7R_8, C_1-C_6alkylaminoC_1-C_6alkyl, arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxyC_1-C_6alkyl, C_1-C_6alkylcarbonylamino, C_1-C_6alkylcarbonyl-aminoC_1-C_6alkyl, -carbonylNR_8C_1-C_6alkylCOR_{10}, wherein R_{10} is NR_7R_8 or C_1-C_6alkylNR_7R_8, arylC_1-C_6alkylcarbonylamino, arylC_1-C_6alkylcarbonylaminoC_1-C_6alkyl,

$CONR_7R_8$, C_1-C_6alkyl$CONR_7R_8$ or arylaminocarbonylaminoC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined below ~~and R_{10} is NR_7R_8 or C_1-C_6alkylNR_7R_8~~;

R_6 ~~are independently~~is hydrogen, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxycarbonyl, aryloxycarbonyl, arylC_1-C_6alkyloxycarbonyl, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxyC_1-C_6alkyl, arylC_1-C_6alkyloxyC_1-C_6-alkyl, NR_7R_8, C_1-C_6alkylaminoC_1-C_6alkyl, arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxyC_1-C_6alkyl, C_1-C_6alkylcarbonylamino, ~~C_1-C_6alkylcarbonyl-aminoC_1-C_6alkyl.~~ carbonylNR_8C_1-C_6alkylCOR_{10}, wherein R_{10} is NR_7R_8, or C_1-C_6alkylNR_7R_8, arylC1-C_6alkylcarbonylamino, arylC_1-C_6alkylcarbonylaminoC_1-C_6alkyl, $CONR_7R_8$, ~~C_1-C_6alkyl$CONR_7R_8$~~ or arylaminocarbonylaminoC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined below ~~and R_{10} is NR_7R_8, or C_1-C_6alkylNR_7R_8~~;

R_7 and R_8 are are independently a saturated or partially saturated cyclic 5, 6 or 7 membered amine, imide or lactam or are independently selected from hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy or arylC_1-C_6alkylcarboxy wherein the alkyl and aryl groups are optionally substituted as defined ~~in the section of definitions~~below; or

R_7 and R_8 together with the nitrogen to which they are attached form a saturated, partially saturated or aromatic monocyclic, bicyclic or tricyclic ring system containing from 3 to 14 carbon atoms and from 0 to 3 additional heteroatoms selected from nitrogen, oxygen or sulphur, wherein the ring system is optionally substituted with at least one C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, C_1-C_6alkyloxy, C_1-C_6-alkyloxyC_1-C_6alkyl, C_1-C_6alkyl-aminoC_1-C_6alkyl or $NR_{11}R_{12}$, wherein R_{11} and R_{12} are independently selected from

hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyl, arylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy or arylC_1-C_6alkylcarboxy; wherein the alkyl and aryl groups are optionally substituted as defined below; ~~or~~

~~R_7 and R_8 are independently a saturated or partial saturated cyclic 5, 6 or 7 membered amine, imide or lactam;~~

wherein the optionally substituted alkyl groups are substituted with one or more groups independently selected from halo, cyano, nitro, trihalomethyl, carbamoyl, hydroxy, oxo, $COOR_3$, ~~$CONR_7R_8$~~, C_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy, ~~NR_7R_8~~, C_1-C_6alkylamino, arylamino, arylC_1-C_6alkylamino, di(arylC_1-C_6alkyl)amino, C_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy, arylcarboxy, arylC_1-C_6alkylcarboxy, C_1-C_6alkylcarbonylamino, -C_1-C_6alkylaminoCOR$_{13}$, wherein R_{13} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy; arylC_1-C_6alkylcarbonylamino, tetrahydrofuranyl, morpholinyl, piperazinyl, ~~$CONR_7R_8$~~, ~~C_1-C_6alkylCONR$_7$R$_8$~~, or a saturated or ~~partial~~ partially saturated cyclic 5, 6 or 7 membered amine, imide or lactam, ~~wherein R_{13} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy;~~

~~and wherein the optionally substituted aryl groups is~~ are substituted with a group selected from halo, nitro, cyano, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, ~~$CONR_7R_8$~~, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxy, arylC_1-C_6alkyloxy, arylC_1-C_6alkyloxyC_1-C_6alkyl, ~~NR_7R_8~~, C_1-C_6alkylamino, C_1-C_6alkylaminoC_1-C_6alkyl, arylamino, arylC_1-C_6alkylamino, arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxy, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxy, arylC_1-C_6alkylcarboxyC_1-C_6alkyl, C_1-C_6alkylcarbonylamino, C_1-C_6alkylcarbonylaminoC_1-C_6alkyl, ~~carbonylNR$_7$C$_1$-C$_6$alkylCOR$_{13}$;~~ arylC_1-C_6alkylcarbonylamino, or arylC_1-C_6-alkylcarbonylaminoC_1-C_6alkyl. ~~$CONR_7R_8$, or C_1-C_6alkylCONR$_7$R$_8$~~.

111. (previously added) The compound according to claim 110, wherein R_1 is COOH, $COOC_1$-C_6alkyl, $COOarylC_1$-C_6alkyl, $COOC_1$-C_6alkylcarbonyloxyC_1-C_6alkyl or $COOC_1$-C_6alkylcarbonyloxyarylC_1-C_6alkyl.

112. (previously added) The compound according to claim 110, wherein n and m are 1.

113. (previously added) The compound according to claim 110, wherein Y is oxygen.

114. (previously added) The compound according to claim 110, wherein R_1 is 5-tetrazolyl, R_5 is C_1-C_6alkylNR_7R_8 and Y is oxygen.

115. (previously added) The compound according to claim 110, wherein R_4 and R_6 are hydrogen.

116. (previously added) The compound according to claim 110, wherein R_6 is C_1-C_6alkylNR_7R_8.

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117. (currently amended) The compound according to claim ~~110~~116, wherein R_7 is hydrogen and R_8 is arylC_1-C_6alkyl ~~the aryl group is pyridyl.~~

118. (currently amended) The compound according to claim ~~110~~117, wherein the aryl group is ~~phenyl optionally substituted with methoxy or $CH_3C(O)$.~~pyridyl.

119. (currently amended) The compound according to claim ~~110~~117, wherein ~~R_7 is hydrogen and R_8 is C_1-C_6alkylaryl.~~the aryl group is phenyl optionally substituted with methoxy or $CH_3(CO)$.

120. (previously added) The compound according to claim 110, wherein R_6 is arylaminocarbonylaminoC_1-C_6alkyl.

121. (previously added) The compound according to claim 110, wherein R_6 is aryloxyC_1-C_6alkyl.

122. (currently amended) The compound according to claim ~~110~~121, wherein the aryl group is 1,1-dioxo-benzo[d]isothiazol-3-yl.

123. (currently amended) the compound according to claim ~~110~~121, wherein the aryl group is 1,1-dioxo-5-phenyl-isothiazol-3-yl.

124. (currently amended) The compound according to claim ~~110~~121, wherein the aryl group is benzo[1,3]dioxol-5-yl.

125. (currently amended) The compound according to claim ~~110~~121, wherein the aryl group is 5-methoxy-2-methyl-1H-indol-3-yl.

126. (previously added) A composition comprising an effective amount of a compound of claim 110, together with one or more pharmaceutically acceptable carriers or diluents and an insulin sensitizer.

127. (previously added) A method of treating type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance or obesity comprising administering to a subject in need thereof an effective amount of a compound of claim 110 and an insulin sensitizer.

128. (previously added) A composition comprising an effective amount of a compound of claim 110, together with oone or more pharmaceutically acceptable carriers or diluents and an agent stimulating insulin release from ß cells.

129. (previously added) A method of treating type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance or obesity comprising administering to a subject in need thereof an effective amount of a compound of claim 110 and an agent stimulating insulin release from ß cells.

130. (previously added) A composition comprising a compound of claim 110, together with one or more pharmaceutically acceptable carriers or diluents and an antiobesity agent.

131. (previously added) A method of treating type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance or obesity comprising administering to a subject in need thereof an effective amount of a compound of claim 110 and an antiobesity agent.

132. (previously added) A composition according to claim 126, wherein the insulin sensitizer is a thiazolidinedione or a pharmaceutically acceptable salt thereof.

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133. (previously added) A composition according to claim 126, wherein the insulin sensitizer is selected from troglitazone, ciglitazone, pioglitazone, rosiglitazone, 5-[4-[3-Methyl-4-oxo-3,4-dihydro-2-quinazolinyl]methoxy]phenyl-methyl]thiazolidine-2,4-dione and 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salts thereof.

134. (previously added) A composition according to claim 126, wherein the insulin sensitizer is (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

135. (previously added) The method according to claim 127, wherein the insulin sensitizer is a thiazolidinedione or (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

136. (previously added) The method according to claim 127, wherein the insulin sensitizer is selected from troglitazone, ciglitazone, pioglitazone, rosiglitazone, 5-[4-[3-Methyl-4-oxo-3,4-dihydro-2-quinazolinyl]methoxy]phenyl-methyl]thiazolidine-2,4-dione or (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

137. (previously added) The method according to claim 127, wherein the insulin sensitizer is (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

138. (previously added) A composition according to claim 128, wherein the agent stimulating insulin release from β cells is repaglinide.

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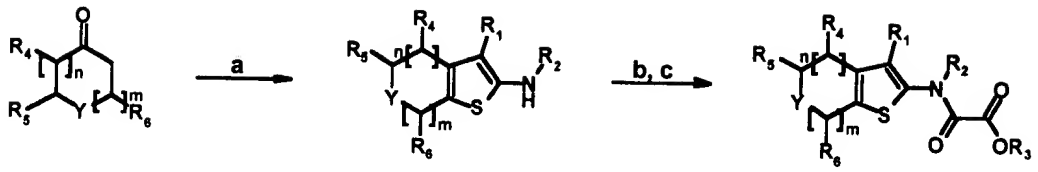
139. (previously added) The method according to claim 129, wherein the agent stimulating insulin release from β cells is repaglinide.

140. (previously added) A composition according to claim 130, wherein the antiobesity agent is orlistat.

141. (previously added) The method according to claim 131, wherein the antiobesity agent is orlistat.

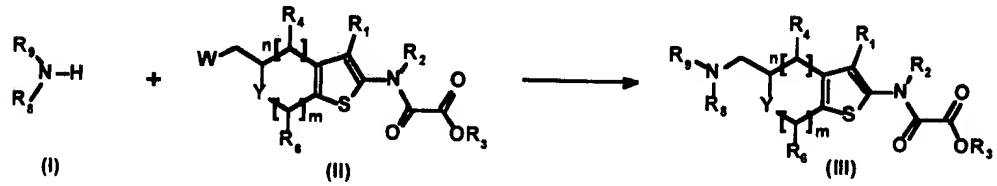
142. (previously added) A method for preparing the compound of claim 110, comprising

A)



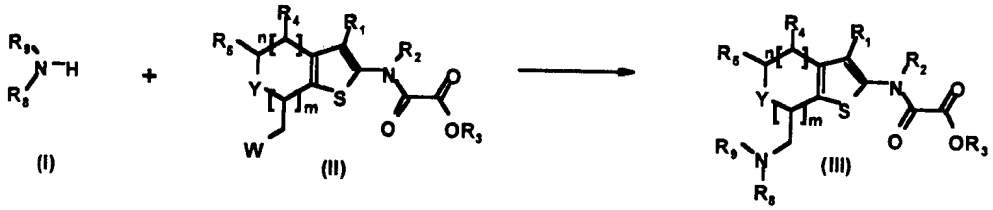
a) $NCCH_2R_1$, sulphur, morpholine or triethylamine, EtOH; b) R_3OCOCOimidazole, THF; c) 25% TFA/CH_2Cl_2;

B)



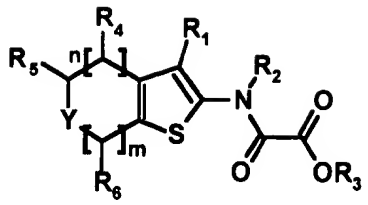
Allowing an amine (I) and a substituted oxalylamide (II) to react under basic conditions or under Mitsunobu conditions to yield (III) wherein W is OH, OSO_2Me or halo;

C)



Allowing an amine (I) and a substituted oxalylamide (II) to react under basic conditions or under Mitsunobu conditions to yield (III) where W is OH, OSO_2Me or halo.

143. (currently amended) A compound of Formula 1



Formula 1

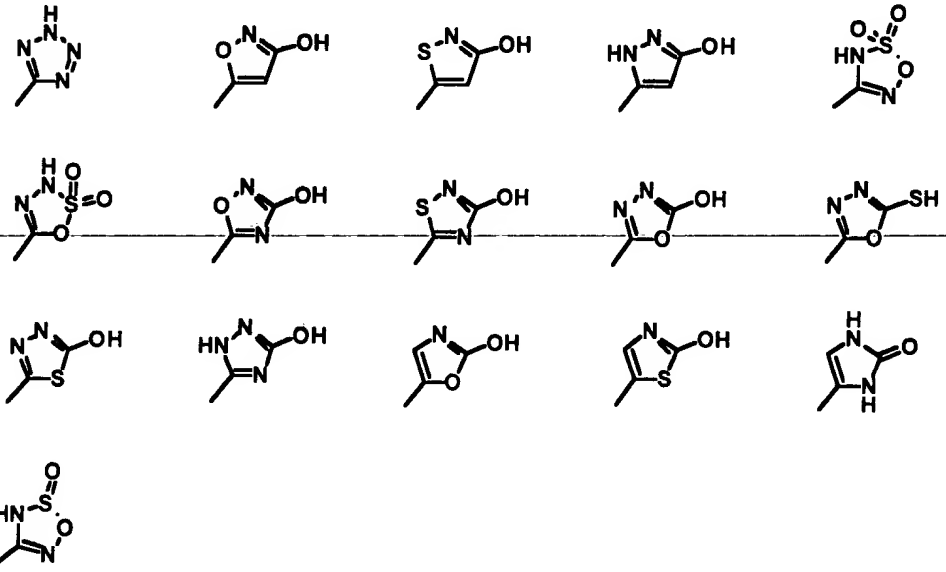
wherein

n is 1 or 2;

m is 1 or 2;

Y is O, S, SO or SO_2;

R_1 is COOH, $COOC_1$-C_6alkyl, $COOarylC_1$-C_6alkyl, $COOC_1$-C_6alkylcarbonyloxyC_1-C_6alkyl, $COOC_1$-C_6alkylcarbonyloxyarylC_1-C_6alkyl or a 5-membered heterocycles selected from the group consisting of:



R_2 is hydrogen;

R_3 is hydrogen, C_1-C_6alkyl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyloxyC_1-C_6alkyl or C_1-C_6alkylcarbonyloxyarylC_1-C_6alkyl;

R_4 is hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined below;

R_5 is C_1-C_6alkylNR_7R_8 wherein R_7 and R_8 together with the nitrogen to which they are attached form a saturated, partially saturated or aromatic monocyclic, bicyclic or tricyclic ring system selected from the group consisting of pyrrolopyrazine~~m~~, pyrrolopyridine, benzo[d]isoxazole, 1,1-dioxo-1,3-dihydro-benzo[d]isothiazole, pyrrolidine and 1,3-dihydro-benzo[d]isothiazole substituted with two oxo groups at the atom positions adjacent to the nitrogen atom, wherein the ring system is optionally be substituted with at least one C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, $COOR_3$, hydroxy, nitro, oxo, C_1-C_6alkyloxy, arylC_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, C_1-C_6alkylaminoC_1-C_6alkyl or NR_9R_{10}, wherein R_9 and R_{10} are independently selected from hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyl, arylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6-alkylcarboxy or arylC_1-C_6alkylcarboxy; wherein the alkyl and aryl groups are optionally substituted as defined below;

wherein the optionally substituted alkyl groups are substituted with one or more groups independently selected from halo, cyano, nitro, trihalomethyl, carbamoyl, hydroxy, oxo, ~~$CONR_7R_8$~~, C_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy, ~~NR_7R_8~~, C_1-C_6alkylamino, arylamino, arylC_1-C_6alkylamino, di(arylC_1-C_6alkyl)amino, C_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy, arylcarboxy, arylC_1-C_6alkylcarboxy, C_1-C_6alkylcarbonylamino, -C_1-~~C_6alkylaminoCOR$_{12}$~~C_6alkylaminoCOR$_{13}$, wherein R_{13} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy; arylC_1-C_6alkylcarbonylamino, tetrahydrofuranyl, morpholinyl, piperazinyl, -~~$CONR_7R_8$~~, ~~C_1-C_6alkylCONR$_7$R$_8$~~, or a saturated or ~~partial~~ partially saturated cyclic 5, 6 or 7 membered amine, imide or lactam, ~~wherein R_{12} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy;~~

and wherein the optionally substituted aryl group is substituted with a group selected from halo, nitro, cyano, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy,

$COOR_3$, ~~$CONR_7R_8$~~, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxy, arylC_1-C_6alkyloxy, arylC_1-C_6alkyloxyC_1-C_6alkyl, ~~NR_7R_8~~, C_1-C_6alkylamino, C_1-C_6alkylaminoC_1-C_6alkyl, arylamino, arylC_1-C_6alkylamino, arylC_1-C_6alkyl-aminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxy, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxy, arylC_1-C_6alkylcarboxyC_1-C_6alkyl, carboxyC_1-C_6-alkyloxy, C_1-C_6alkylcarbonylamino, ~~C_1-C_6alkylcarbonylaminoC_1-C_6alkyl, -carbonylNR_7C_1-C_6alkylCOR_{12},~~ C_6alkylaminoCOR$_{13}$, wherein R_{13} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy; arylC_1-C_6alkylcarbonylamino or, arylC_1-C_6-alkylcarbonylaminoC_1-C_6alkyl, ~~$CONR_7R_8$, or C_1-C_6alkyl$CONR_7R_8$~~;

R_6 is hydrogen~~, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, oxo, carboxy, carboxyC_1-C_6alkyl, C_1-C_6alkyloxy-carbonyl, aryloxycarbonyl, arylC_1-C_6alkyloxycarbonyl, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxy, arylC_1-C_6alkyloxy, aryloxyC_1-C_6alkyl, arylC_1-C_6alkyloxyC_1-C_6-alkyl, NR_8R_9, C_1-C_6alkylaminoC_1-C_6alkyl, arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6-alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxy, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylcarboxy, arylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxy, arylC_1-C_6alkyl-carboxyC_1-C_6alkyl, C_1-C_6alkylcarbonylamino, C_1-C_6alkylcarbonylaminoC_1-C_6alkyl, -carbonylNR_8C_1-C_6alkylCOR_{11}, aryl$C1$-C_6alkylcarbonylamino, arylC_1-C_6alkylcarbonylaminoC_1-C_6alkyl, $CONR_7R_8$, C_1-C_6alkyl$CONR_7R_8$ or arylaminocarbonylaminoC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined for R_5 and R_{11} is NR_7R_8, or C_1-C_6alkylNR_7R_8~~;

~~R_7 and R_8 are independently selected from hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy or arylC_1-C_6alkylcarboxy wherein the alkyl and aryl groups are optionally substituted as defined in the section of definitions; or R_7 and R_8 together with the nitrogen to which they are attached form a saturated, partially saturated or aromatic monocyclic, bicyclic or tricyclic ring system containing from 3 to 14 carbon atoms and from 0 to 3 additional heteroatoms selected from nitrogen, oxygen or sulphur, wherein the ring system is optionally substituted with at least one C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, C_1-C_6alkyloxy, C_1-C_6-alkyloxyC_1-C_6alkyl, C_1-C_6alkylaminoC_1-C_6alkyl or $NR_{11}R_{12}$, wherein R_{11} and R_{12} are independently selected from hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyl, arylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy or arylC_1-C_6alkylcarboxy; wherein the alkyl and aryl groups are optionally substituted as defined below; or~~

~~Wherein R_7 and R_8 are independently a saturated or partial saturated cyclic 5, 6 or 7 membered amine, imide or lactam;~~

~~wherein the optionally substituted alkyl groups are substituted with one or more groups independently selected from halo, cyano, nitro, trihalomethyl, carbamoyl, hydroxy, oxo, $COOR_3$, $CONR_7R_8$, C_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy, NR_7R_8, C_1-C_6alkylamino, arylamino, arylC_1-C_6alkylamino, di(arylC_1-C_6alkyl)amino, C_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy, arylcarboxy, arylC_1-C_6alkylcarboxy, C_1-C_6alkylcarbonylamino, C_1-C_6alkylaminoCOR_{13}, arylC_1-C_6alkylcarbonylamino, tetrahydrofuranyl, morpholinyl, piperazinyl, $CONR_7R_8$, C_1-C_6alkyl$CONR_7R_8$, or a saturated or partial saturated cyclic 5, 6 or 7 membered amine, imide or lactam, wherein R_{13} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy;~~

~~and wherein the optionally substituted aryl group is substituted with a group selected from halo, nitro, cyano, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, $CONR_7R_8$, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxy, arylC_1-C_6alkyloxy,~~

~~arylC$_1$-C$_6$alkyloxyC$_1$-C$_6$alkyl, NR$_7$R$_8$, C$_1$-C$_6$alkylamino, C$_1$-C$_6$alkylaminoC$_1$-C$_6$alkyl, arylamino, arylC$_1$-C$_6$alkylamino, arylC$_1$-C$_6$alkylaminoC$_1$-C$_6$alkyl, di(arylC$_1$-C$_6$alkyl)aminoC$_1$-C$_6$alkyl, C$_1$-C$_6$alkylcarbonyl, C$_1$-C$_6$alkylcarbonylC$_1$-C$_6$alkyl, arylC$_1$-C$_6$alkylcarbonyl, arylC$_1$-C$_6$alkylcarbonylC$_1$-C$_6$alkyl, C$_1$-C$_6$alkylcarboxy, C$_1$-C$_6$alkylcarboxyC$_1$-C$_6$alkyl, arylC$_1$-C$_6$alkylcarboxy, arylC$_1$-C$_6$alkylcarboxyC$_1$-C$_6$alkyl, C$_1$-C$_6$alkylcarbonylamino, C$_1$-C$_6$alkylcarbonylaminoC$_1$-C$_6$alkyl, carbonylNR$_7$C$_1$-C$_6$alkylCOR$_{13}$, arylC$_1$-C$_6$alkylcarbonylamino, arylC$_1$-C$_6$-alkylcarbonylaminoC$_1$-C$_6$alkyl, CONR$_7$R$_8$, or C$_1$-C$_6$alkylCONR$_7$R$_8$.~~

or a salt thereof with a pharmaceutically acceptable acid or base, or any optical isomer or mixture of optical isomers, a racemic mixture, or any tautomeric form, or prodrug thereof.

144. (previously added) The compound according to claim 143, wherein the ring system is 1,3-dihydro-benzo[d]isothiazolyl, substituted with 2 oxo groups at the atom positions adjacent to the nitrogen atom.

145. (previously added) The compound according to claim 143, wherein the ring system is thiazolidin-2,4-dione.

146. (previously added) The compound according to claim 143, wherein the ring system is 5-(aryl-methyl)-thiazolidin-2,4-dione.

147. (previously added) The compound according to claim 143, wherein the ring system is pyrrolo[3,4-b]pyridine-5,7-dione.

148. (previously added) The compound according to claim 143, wherein the ring system is pyrrolo[3,4-b]pyridine-1,3-dione.

149. (previously added) The compound according to claim 143, wherein the ring system is pyrrolo[3,4-b]pyrazine-5,7-dione.

150. (previously added) A composition comprising an effective amount of a compound of claim 143, together with one or more pharmaceutically acceptable carriers or diluents and an insulin sensitizer.

151. (previously added) A method of treating type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance or obesity comprising administering to a subject in need thereof an effective amount of a compound of claim 143 and an insulin sensitizer.

152. (previously added) A composition comprising an effective amount of a compound of claim 143, together with one or more pharmaceutically acceptable carriers or diluents and an agent stimulating insulin release from ß cells.

153. (previously added) A method of treating type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance or obesity comprising administering to a subject in need thereof an effective amount of a compound of claim 143 and an agent stimulating insulin release from ß cells.

154. (previously added) A composition comprising a compound of claim 143, together with one or more pharmaceutically acceptable carriers or diluents and an antiobesity agent.

155. (previously added) A method of treating type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance or obesity comprising administering to a subject in need thereof an effective amount of a compound of claim 143 and an antiobesity agent.

156. (previously added) A composition according to claim 150, wherein the insulin sensitizer is a thiazolidinedione or a pharmaceutically acceptable salt thereof.

157. (previously added) A composition according to claim 150, wherein the insulin senitizer is selected from troglitazone, ciglitazone, pioglitazone, rosiglitazone, 5-[4-[3-Methyl-4-oxo-3,4-dihydro-2-quinazolinyl]methoxy]phenyl-methyl]thiazolidine-2,4-dione and 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salts thereof.

158. (previously added) A composition according to claim 150, wherein the insulin sensitizer is (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salts thereof.

159. (previously added) The method according to claim 151, wherein the insulin sensitizer is a thiazolidinedione or (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

160. (previously added) The method according to claim 151, wherein the insulin sensitizer is selected from troglitazone, ciglitazone, pioglitazone, rosiglitazone, 5-[4-[3-Methyl-4-oxo-3,4-dihydro-2-quinazolinyl]methoxy]phenyl-methyl]thiazolidine-2,4-dione or (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

161. (previously added) The method according to claim 151, wherein the insulin sensitizer is (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

162. (previously added) A composition according to claim 152, wherein the agent stimulating insulin release from β cells is repaglinide.

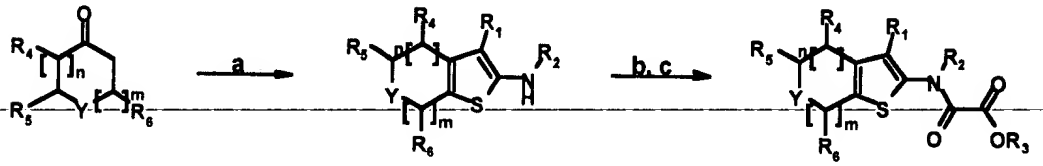
163. (previously added) The method according to claim 153, wherein the agent stimulating insulin release from β cells is repaglinide.

164. (previously added) A composition according to claim 154, wherein the antiobesity agent is orlistat.

165. (previously added) The method according to claim 155, wherein the antiobesity agent is orlistat.

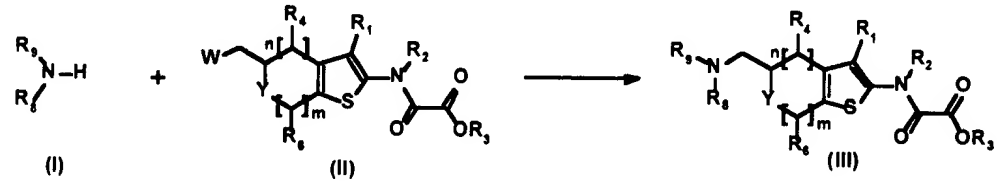
166. (previously added) A method for preparing the compound of claim 143, comprising

A)



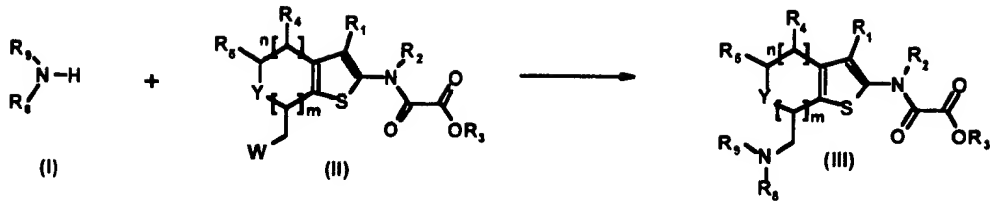
a) $NCCH_2R_1$, sulphur, morpholine or triethylamine, EtOH; b) R_3OCOCOimidazole, THF; c) 25% TFA/CH_2Cl_2;

B)



Allowing an amine (I) and a substituted oxalylamide (II) to react under basic conditions or under Mitsunobu conditions to yield (III) wherein W is OH, OSO_2Me or halo;

C)

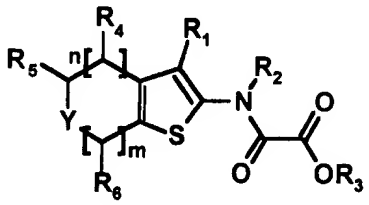


(I) (II) (III)

Allowing an amine (I) and a substituted oxalylamide (II) to react under basic conditions or under Mitsunobu conditions to yield (III) where W is OH, OSO_2Me or halo.

167. (currently amended) A compound of Formula 1

Formula 1



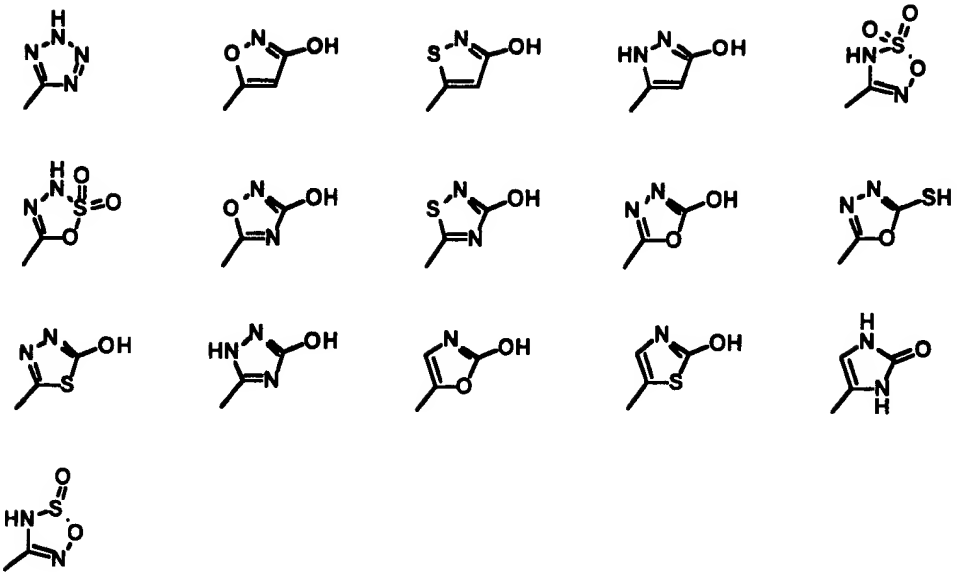
wherein

n is 1 or 2;

m is 1 or 2;

Y is O, S, SO or SO_2;

R_1 is COOH, $COOC_1$-C_6alkyl, $COOarylC_1$-C_6alkyl, $COOC_1$-C_6alkylcarbonyloxyC_1-C_6alkyl, $COOC_1$-C_6alkylcarbonyloxyarylC_1-C_6alkyl or a 5-membered heterocycles selected from the group consisting of



R_2 is hydrogen;

R_3 is hydrogen, C_1-C_6alkyl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyloxyC_1-C_6alkyl or C_1-C_6alkylcarbonyloxyarylC_1-C_6alkyl;

R_4 is hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined below;

R_5 is C_1-C_6alkylNR_7R_8 wherein R_7 and R_8 together with the nitrogen to which they are attached form isoindol wherein the ring system is optionally be substituted with at least one C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, fluoro, hydroxy, oxo, C_1-C_6alkyloxy, arylC_1-C_6alkyloxy, C_1-C_6-alkyloxyC_1-C_6alkyl, C_1-C_6alkylamino-C_1-C_6alkyl or NR_9R_{10}, wherein R_9 and R_{10} are independently selected from hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyl, arylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy or arylC_1-C_6alkylcarboxy; wherein the alkyl and aryl groups are optionally substituted as defined below or optionally substituted with one chloro or six chloros;

wherein the optionally substituted alkyl groups are substituted with one or more groups independently selected from halo, cyano, nitro, trihalomethyl, carbamoyl, hydroxy, oxo, $COOR_3$, ~~$CONR_7R_8$~~, C_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy, ~~NR_7R_8~~, C_1-C_6alkylamino, arylamino, arylC_1-C_6alkylamino, di(arylC_1-C_6alkyl)amino, C_1-C_6alkylcarbonyl, arylC_1-C_6-alkylcarbonyl, C_1-C_6alkylcarboxy, arylcarboxy, arylC_1-C_6alkylcarboxy, C_1-C_6alkylcarbonylamino, -C_1-~~C_6alkylaminoCOR$_{12}$~~C_6alkylaminoCOR$_{12}$$C_6$alkylaminoCOR$_{13}$, wherein R_{13} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy; arylC_1-C_6alkylcarbonylamino, tetrahydrofuranyl, morpholinyl, piperazinyl, ~~$CONR_7R_8$~~, ~~C_1-C_6alkylCONR$_7$R$_8$~~, or a saturated or ~~partial~~ partially saturated cyclic 5, 6 or 7 membered amine, imide or lactam, ~~wherein R_{11} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy;~~

and wherein the optionally substituted aryl group is substituted with a group selected from halo, nitro, cyano, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, $COOR_3$, ~~$CONR_7R_8$~~, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxy, arylC_1-C_6alkyloxy, arylC_1-C_6alkyloxyC_1-C_6alkyl, C_1-C_6alkylthio, arylC_1-C_6alkylthio, NR_7R_8, C_1-C_6-alkylamino, C_1-C_6alkylaminoC_1-C_6alkyl, arylamino, arylC_1-C_6alkylamino, arylC_1-C_6alkyl-aminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxy, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxy, arylC_1-C_6alkylcarboxyC_1-C_6alkyl, carboxyC_1-C_6-alkyloxy, C_1-C_6alkylcarbonylamino, C_1-C_6alkylcarbonylaminoC_1-C_6alkyl, -carbonylNR$_7$C$_1$-~~C_6alkylCOR$_{12}$~~C_6alkylCOR$_{11}$, , wherein R_{11} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy; arylC_1-C_6alkylcarbonylamino, arylC_1-C_6-alkylcarbonylaminoC_1-C_6alkyl,~~$CONR_7R_8$~~, ~~or C_1-C_6alkylCONR$_7$R$_8$~~;

R_6 is hydrogen~~, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, oxo, carboxy, carboxyC_1-C_6alkyl, C_1-C_6alkyloxycarbonyl, aryloxycarbonyl, arylC_1-C_6alkyloxycarbonyl, C_1-~~

~~C_6alkyloxyC_1-C_6alkyl, aryloxyC_1-C_6alkyl, arylC_1-C_6alkyloxyC_1-C_6-alkyl, NR_8R_9, C_1-C_6alkylaminoC_1-C_6alkyl, arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6-alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxy, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylcarboxy, arylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxy, C_1-C_6alkylcarbonylamino, C_1-C_6alkylcarbonylaminoC_1-C_6alkyl, -carbonylNR_8C_1-C_6alkylCOR_{12}, arylC_1-C_6alkylcarbonylamino, arylC_1-C_6alkylcarbonylaminoC_1-C_6alkyl, $CONR_7R_8$, C_1-C_6alkyl$CONR_7R_8$ or arylaminocarbonylaminoC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined for R_5 and R_{12} is NR_7R_8, or C_1-C_6alkylNR_7R_8;~~

~~Wherein R_7 and R_8 are independently selected from hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy or arylC_1-C_6alkylcarboxy wherein the alkyl and aryl groups are optionally substituted as defined in the section of definitions; or R_7 and R_8 together with the nitrogen to which they are attached form a saturated, partially saturated or aromatic monocyclic, bicyclic or tricyclic ring system containing from 3 to 14 carbon atoms and from 0 to 3 additional heteroatoms selected from nitrogen, oxygen or sulphur, wherein the ring system is optionally substituted with at least one C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, C_1-C_6alkyloxy, C_1-C_6-alkyloxyC_1-C_6alkyl, C_1-C_6alkylaminoC_1-C_6alkyl or $NR_{11}R_{12}$, wherein R_{11} and R_{12} are independently selected from hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyl, arylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy or arylC_1-C_6alkylcarboxy; wherein the alkyl and aryl groups are optionally substituted as defined below; or~~

~~R_7 and R_8 are independently a saturated or partial saturated cyclic 5, 6 or 7 membered amine, imide or lactam;~~

~~wherein the optionally substituted alkyl groups are substituted with one or more groups independently selected from halo, cyano, nitro, trihalomethyl, carbamoyl, hydroxy, oxo, $COOR_3$, $CONR_7R_8$, C_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy, NR_7R_8, C_1-~~

~~C_6alkylamino, arylamino, arylC_1-C_6alkylamino, di(arylC_1-C_6alkyl)amino, C_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy, arylcarboxy, arylC_1-C_6alkylcarboxy, C_1-C_6alkylcarbonylamino, C_1-C_6alkylaminoCOR$_{13}$, arylC_1-C_6alkylcarbonylamino, tetrahydrofuranyl, morpholinyl, piperazinyl, $CONR_7R_8$, C_1-C_6alkyl$CONR_7R_8$, or a saturated or partial saturated cyclic 5, 6 or 7 membered amine, imide or lactam, wherein R_{13} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy;~~

~~and wherein the optionally substituted aryl group is substituted with a group selected from halo, nitro, cyano, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, $CONR_7R_8$, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxy, arylC_1-C_6alkyloxy, arylC_1-C_6alkyloxyC_1-C_6alkyl, NR_7R_8, C_1-C_6alkylamino, C_1-C_6alkylaminoC_1-C_6alkyl, arylamino, arylC_1-C_6alkylamino, arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxy, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxy, arylC_1-C_6alkylcarboxyC_1-C_6alkyl, C_1-C_6alkylcarbonylamino, C_1-C_6alkylcarbonylaminoC_1-C_6alkyl, carbonylNR_7C_1-C_6alkylCOR_{13}, arylC_1-C_6alkylcarbonylamino, arylC_1-C_6-alkylcarbonylaminoC_1-C_6alkyl, $CONR_7R_8$, or C_1-C_6alkyl$CONR_7R_8$.~~

or a salt thereof with a pharmaceutically acceptable acid or base, or any optical isomer or mixture of optical isomers, a racemic mixture, or any tautomeric form, or prodrug thereof.

168. (previously added) The compound of claim 167, wherein the ring system is optionally substituted with hydroxy, nitro, methoxy, benzyloxy, fluoro, chloro $CH_3CH_2CH_2NHC(O)$- or $CH_3C(O)NH$.

169. (previously added) A composition comprising an effective amount of a compound of claim 167, together with one or more pharmaceutically acceptable carriers or diluents and an insulin sensitizer.

170. (previously added) A method of treating type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance or obesity comprising administering to a subject in need thereof an effective amount of a compound of claim 167 and an insulin sensitizer.

171. (previously added) A composition comprising an effective amount of a compound of claim 167, together with one or more pharmaceutically acceptable carriers or diluents and an agent stimulating insulin release from ß cells.

172. (previously added) A method of treating type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance or obesity comprising administering to a subject in need thereof an effective amount of a compound of claim 167 and an agent stimulating insulin release from ß cells.

173. (previously added) A composition comprising a compound of claim 167, together with one or more pharmaceutically acceptable carriers or diluents and an antiobesity agent.

174. (previously added) A method of treating type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance or obesity comprising administering to a subject in need thereof an effective amount of a compound of claim 167 and an antiobesity agent.

175. (previously added) A composition according to claim 169, wherein the insulin sensitizer is a thiazolidinedione or a pharmaceutically acceptable salt thereof.

176. (previously added) A composition according to claim 169, wherein the insulin senitizer is selected from troglitazone, ciglitazone, pioglitazone, rosiglitazone, 5-[4-[3-Methyl-4-oxo-3,4-dihydro-2-quinazolinyl]methoxy]phenyl-methyl]thiazolidine-2,4-dione and 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salts thereof.

177. (previously added) A composition according to claim 169, wherein the insulin sensitizer is (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salts thereof.

178. (previously added) The method according to claim 170, wherein the insulin sensitizer is a thiazolidinedione or (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

179. (previously added) The method according to claim 170, wherein the insulin sensitizer is selected from troglitazone, ciglitazone, pioglitazone, rosiglitazone, 5-[4-[3-Methyl-4-oxo-3,4-dihydro-2-quinazolinyl]methoxy]phenyl-methyl]thiazolidine-2,4-dione or (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

180. (previously added) The method according to claim 170, wherein the insulin sensitizer is (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

181. (previously added) A composition according to claim 171, wherein the agent stimulating insulin release from β cells is repaglinide.

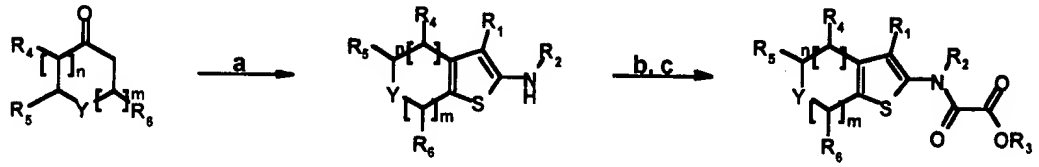
182. (previously added) The method according to claim 172, wherein the agent stimulating insulin release from β cells is repaglinide.

183. (previously added) A composition according to claim 173, wherein the antiobesity agent is orlistat.

184. (previously added) The method according to claim 174, wherein the antiobesity agent is orlistat.

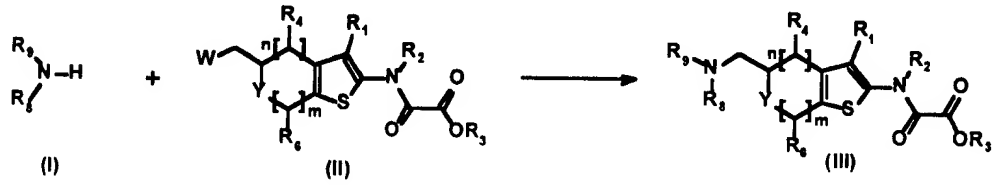
185. (previously added) A method for preparing the compound of claim 167, comprising

A)



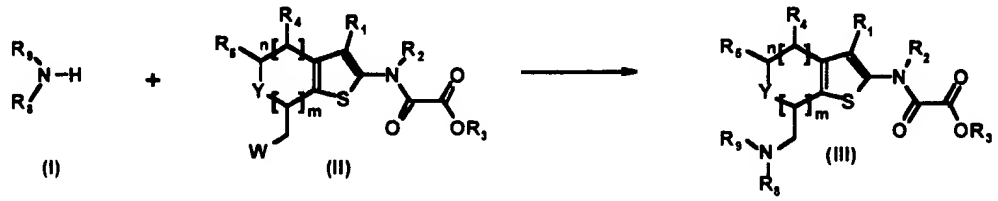
a) $NCCH_2R_1$, sulphur, morpholine or triethylamine, EtOH; b) R_3OCOCOimidazole, THF; c) 25% TFA/CH_2Cl_2;

B)



Allowing an amine (I) and a substituted oxalylamide (II) to react under basic conditions or under Mitsunobu conditions to yield (III) wherein W is OH, OSO_2Me or halo;

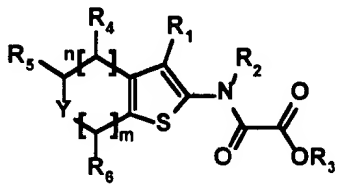
C)



(I) (II) (III)

Allowing an amine (I) and a substituted oxalylamide (II) to react under basic conditions or under Mitsunobu conditions to yield (III) where W is OH, OSO_2Me or halo.

186. (currently amended) A compound of Formula 1



Formula 1

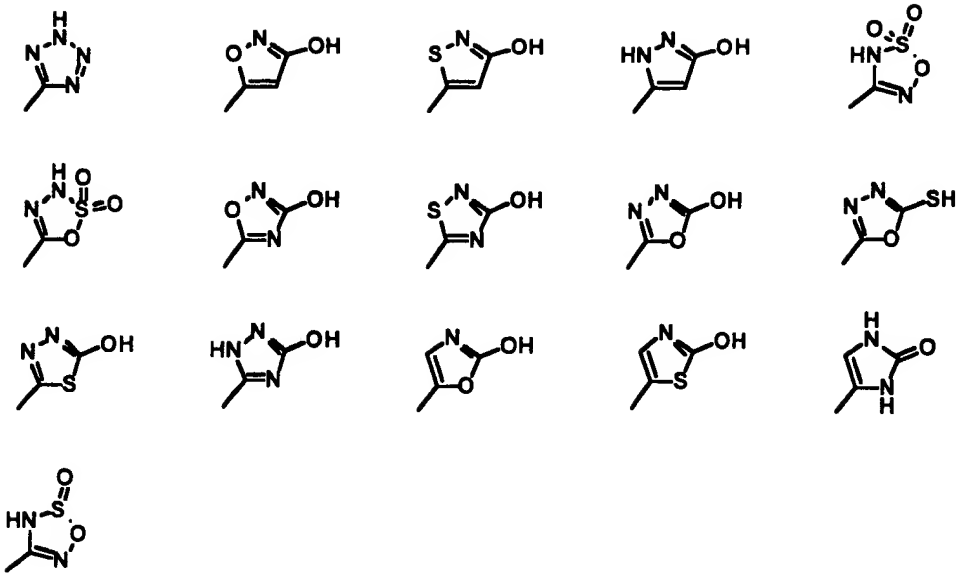
wherein

n is 1 or 2;

m is 1 or 2;

Y is O, S, SO or SO_2;

R_1 is COOH, $COOC_1$-C_6alkyl, $COOarylC_1$-C_6alkyl, $COOC_1$-C_6alkylcarbonyloxyC_1-C_6alkyl, $COOC_1$-C_6alkylcarbonyloxyarylC_1-C_6alkyl or a 5-membered heterocycles selected from the group consisting of:



R_2 is hydrogen;

R_3 is hydrogen, C_1-C_6alkyl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyloxyC_1-C_6alkyl or C_1-C_6alkylcarbonyloxyarylC_1-C_6alkyl;

R_4 is hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined below;

R_5 is ~~or~~ C_1-C_6alkylNR_7R_8 or arylC_1-C_6alkylcarbonylaminoC_1-C_6alkyl, wherein the alkyl and aryl groups are optionally substituted as defined below;

R_6 is hydrogen, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, oxo, carboxy, carboxyC_1-C_6alkyl, C_1-C_6alkyloxycarbonyl, aryloxycarbonyl, arylC_1-C_6alkyloxycarbonyl, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxyC_1-C_6alkyl, arylC_1-C_6alkyloxyC_1-C_6alkyl, NR_7R_8, C_1-C_6alkylaminoC_1-C_6alkyl, arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6-alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxyC_1-C_6alkyl, C_1-C_6alkylcarbonylamino, C_1-

C_6alkylcarbonylaminoC_1-C_6alkyl, -carbonylNR_8C_1-~~C_6alkylCOR$_{11}$~~C_6alkylCOR$_{13}$, wherein R_{13} is NR_7R_8, or C_1-C6alkylNR_7R_8, arylC1-C_6alkylcarbonylamino, arylC_1-C_6alkylcarbonylaminoC_1-C_6alkyl, $CONR_7R_8$, C_1-C_6alkylCONR$_7$R$_8$ or arylaminocarbonylaminoC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined ~~for R_5 and~~below ~~R_{11} is NR_7R_8, or C_1-C_6alkylNR_7R_8~~;

R_7 and R_8 are independently selected from hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyl, arylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy or arylC_1-C_6alkylcarboxy wherein the alkyl and aryl groups are optionally substituted as defined ~~in the section of definitions~~below; or R_7 and R_8 are independently a saturated or ~~partial~~ partially saturated cyclic 5, 6 or 7 membered amine, imide or lactam;
wherein the optionally substituted alkyl groups are substituted with one or more groups independently selected from halo, cyano, nitro, trihalomethyl, carbamoyl, hydroxy, oxo, $COOR_3$, ~~$CONR_7R_8$, C_1-C_6alkyl,~~ C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy, ~~NR_7R_8,~~ C_1-C_6alkylamino, arylamino, arylC_1-C_6alkylamino, di(arylC_1-C_6alkyl)amino, C_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkyl-carboxy, arylcarboxy, arylC_1-C_6alkylcarboxy, C_1-C_6alkylcarbonylamino, ~~C_1-C_6alkylamino$COR_{12}$$C_6$alkylamino$COR_{13}$~~, , wherein R_{13} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy , arylC$_1$-C_6alkylcarbonylamino, tetrahydrofuranyl, morpholinyl, piperazinyl, ~~$CONR_7R_8$, C_1-C_6alkylCONR$_7$R$_8$,~~ or a saturated or ~~partial~~ partially saturated cyclic 5, 6 or 7 membered amine, imide or lactam~~, wherein R_{12} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy~~;
and wherein the optionally substituted aryl group is substituted with a group selected from halo, nitro, cyano, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, $COOR_3$, ~~$CONR_7R_8$,~~ C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxy, arylC_1-C_6alkyloxy, arylC_1-C_6alkyloxyC_1-C_6alkyl, C_1-C_6alkylthio, arylthio, arylC_1-C_6alkylthio, ~~NR_7R_8,~~ C_1-C_6-alkylamino, C_1-C_6alkylaminoC_1-C_6alkyl, arylamino, arylC_1-C_6alkylamino, arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl,

C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxy, arylC_1-C_6alkylcarboxy, C_1-C_6alkylcarbonylamino, C_1-C_6alkylcarbonylaminoC_1-C_6alkyl, ~~carbonylNR$_7$C$_1$-C$_6$alkylCOR$_{11}$,~~ arylC_1-C_6alkylcarbonylamino, arylC_1-C_6-alkylcarbonylaminoC_1-C_6alkyl, ~~CONR$_7$R$_8$, or C$_1$-C$_6$alkylCONR$_7$R$_8$~~

~~and wherein aryl in R$_5$ is selected from the group consisting of phenyl, pyridyl, imidazolyl, benzo[1,3]dioxole, benzothizolyl, biphenyl, indenyl, fluorenyl, naphthyl, pyrazolyl, triazolyl, oxazolyl, thiazolyl, quinolyl, pyrimidinyl, benzo[b]thiophenyl, benzothiazolyl, piperidinyl, pyrrolidinyl, phenylpyridyl, phenylpyrimidyl, benzothiazolyl, carbazolyl,~~

or a salt thereof with a pharmaceutically acceptable acid or base, or any optical isomer or mixture of optical isomers, a racemic mixture, or any tautomeric form, or prodrug thereof.

187. (previously added) The compound according to claim 186, wherein R_1 is COOH, COOC_1-C_6alkyl, COOarylC_1-C_6alkyl, COOC_1-C_6alkylcarbonyloxyC_1-C_6alkyl, COOC_1-C_6alkylcarbonyloxyarylC_1-C_6alkyl.

188. (previously added) The compound according to claim 186, wherein n and m are 1.

189. (previously added) The compound according to claim 186, wherein Y is oxygen.

190. (previously added) The compound according to claim 186, wherein R_1 is 5-tetrazolyl, R_5 is C_1-C_6alkylNR$_7$R$_8$ and Y is oxygen.

191. (previously added) The compound according to claim 186, wherein R_4 and R_6 are hydrogen.

192. (previously added) The compound according to claim 186, wherein R_6 is C_1-C_6alkylNR$_7$R$_8$.

193. (currently amended) The compound according to claim ~~186~~192, wherein R_7 is hydrogen and R_8 is arylC_1-C_6alkyl~~the aryl group is pyridyl~~.

194. (currently amended) The compound according to claim ~~186~~193, wherein the aryl group is ~~phenyl optionally substituted with methoxy or $CH_3C(O)$~~pyridyl.

195. (currently amended) The compound according to claim ~~186~~193, wherein the aryl group is phenyl optionally substituted with methoxy or $CH_3C(O)$.~~wherein R_7 is hydrogen and R_8 is C_1-C_6alkylaryl.~~

196. (previously added) The compound according to claim 186, wherein R_6 is arylaminocarbonylaminoC_1-C_6alkyl.

197. (previously added) The compound according to claim 186, wherein R_6 is aryloxyC_1-C_6alkyl.

198. (currently amended) The compound according to claim ~~186~~197, wherein the aryl group is 1,1-dioxo-benzo[d]isothiazol-3-yl.

199. (currently amended) the compound according to claim ~~186~~197, wherein the aryl group is 1,1-dioxo-5-phenyl-isothiazol-3-yl.

200. (currently amended) The compound according to claim ~~186~~197, wherein the aryl group is benzo[1,3]dioxol-5-yl.

201. (currently amended) The compound according to claim ~~186~~197, wherein the aryl group is 5-methoxy-2-methyl-1H-indol-3-yl.

202.(previously added) A composition comprising an effective amount of a compound of claim 186, together with one or more pharmaceutically acceptable carriers or diluents and an insulin sensitizer.

203.(previously added) A method of treating type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance or obesity comprising administering to a subject in need thereof an effective amount of a compound of claim 186 and an insulin sensitizer.

204.(previously added) A composition comprising an effective amount of a compound of claim 186, together with one or more pharmaceutically acceptable carriers or diluents and an agent stimulating insulin release from ß cells.

205.(previously added) A method of treating type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance or obesity comprising administering to a subject in need thereof an effective amount of a compound of claim 186 and an agent stimulating insulin release from ß cells.

206. (previously added) A composition comprising a compound of claim 186, together with one or more pharmaceutically acceptable carriers or diluents and an antiobesity agent.

207. (previously added) A method of treating type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance or obesity comprising administering to a subject in need thereof an effective amount of a compound of claim 187 and an antiobesity agent.

208. (previously added) A composition according to claim 202, wherein the insulin sensitizer is a thiazolidinedione or a pharmaceutically acceptable salt thereof.

209. (previously added) A composition according to claim 202, wherein the insulin senitizer is selected from troglitazone, ciglitazone, pioglitazone, rosiglitazone, 5-[[4-[3-Methyl-4-oxo-3,4-dihydro-2-quinazolinyl]methoxy]phenyl-methyl]thiazolidine-2,4-dione and 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salts thereof.

210. (previously added) A composition according to claim 202, wherein the insulin sensitizer is (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

211. (previously added) The method according to claim 203, wherein the insulin sensitizer is a thiazolidinedione or (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

212. (previously added) The method according to claim 203, wherein the insulin sensitizer is selected from troglitazone, ciglitazone, pioglitazone, rosiglitazone, 5-[[4-[3-Methyl-4-oxo-3,4-dihydro-2-quinazolinyl]methoxy]phenyl-methyl]thiazolidine-2,4-dione or (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

213. (previously added) The method according to claim 203, wherein the insulin sensitizer is (-) 3-[4-[2-Phenoxazin-10-yl)ethoxy]phenyl]-2-ethoxypropanoic acid or a pharmaceutically acceptable salt thereof.

214. (previously added) A composition according to claim 204, wherein the agent stimulating insulin release from β cells is repaglinide.

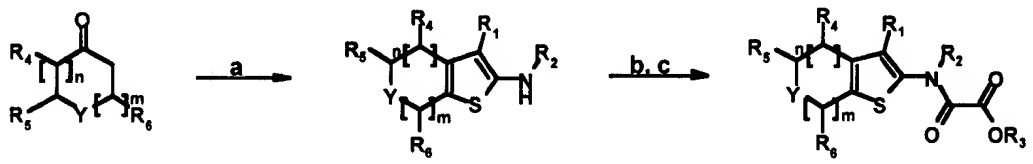
215. (previously added) The method according to claim 205, wherein the agent stimulating insulin release from β cells is repaglinide.

216. (previously added) A composition according to claim 206, wherein the antiobesity agent is orlistat.

217. (previously added) The method according to claim 209, wherein the antiobesity agent is orlistat.

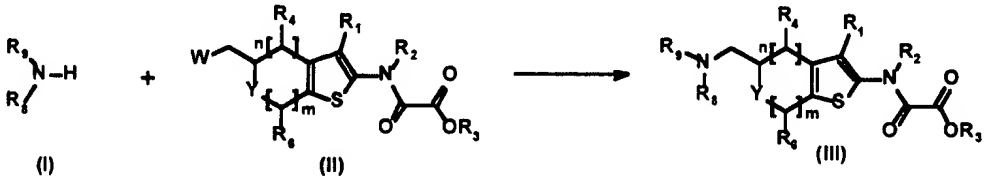
218. (previously added) A method for preparing the compound of claim 186, comprising

A)



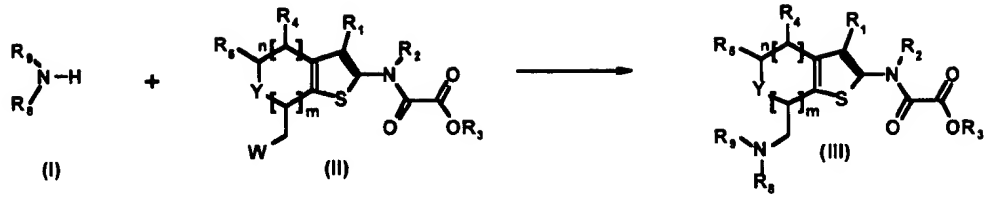
a) $NCCH_2R_1$, sulphur, morpholine or triethylamine, EtOH; b) R_3OCOCOimidazole, THF; c) 25% TFA/CH_2Cl_2;

B)



Allowing an amine (I) and a substituted oxalylamide (II) to react under basic conditions or under Mitsunobu conditions to yield (III) wherein W is OH, OSO_2Me or halo;

C)



Allowing an amine (I) and a substituted oxalylamide (II) to react under basic conditions or under Mitsunobu conditions to yield (III) where W is OH, OSO_2Me or halo.

219. (previously added) A compound which acts as an inhibitor of Protein Tyrosine Phosphatases selected from the group consisting of

2-(Oxalyl-amino) (1,1,3-trioxo-1,3-dihydro-1H-benzo[d]isothiazol-2-ylmethyl)-4,7-dihydro-5H-thieno[2,3-c]pyran carboxylic acid;

5-(4-Chloro-1 3-dioxo-1,3-dihydro-isoindol-2-yl-methyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(4,5,6,7-Tetrachloro-1,3-dioxo-1,3-dihydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(5-Methoxy-1,3-dioxo-1,3-dihydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(4-Hydroxy-1,3-dioxo-1,3-dihydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(4-Benzyloxy-1,3-dioxo-1,3-dihydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(4-Fluoro-1,3-dioxo-1,3-dihydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(1,3-Dioxo-1,3-dihydro-benzo[f]isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(5-Acetylamino-1,3-dioxo-1,3-dihydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(4-Acetylamino-1,3-dioxo-1,3-dihydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(5,7-Dioxo-5,7-dihydro-pyrrolo[3,4-b]pyrazin-6-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(5,7-Dioxo-5,7-dihydro-pyrrolo[3,4-b]pyridin-6-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(5,7-Dioxo-5,7-dihydro-pyrrolo[3,4-b]pyridin-6-ylmethyl)-2-(oxalylamino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(5,7-Dioxo-5,7-dihydro-pyrrolo[3,4-c]pyridin-6-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(5-Nitro-1,3-dioxo-1,3-dihydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(5-Hydroxy-1,3-dioxo-1,3-dihydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(4-Methoxy-1,3-dioxo-1 3-dihydro-isoindol-2-ylmethyl) (oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(4-Nitro-1,3-dioxo-1,3-dihydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(4-(4-Chloro-phenylsulfanyl)-6-methyl-1,3-dioxo-1,3-dihydro-pyrrolo[3,4-c]pyridin-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(3-Imidazol-1-yl-2,5-dioxo-pyrrolidin-1-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

Oxalic acid 3-carboxy-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-5-ylmethyI este rmethyl;

Oxalic acid (3-carboxy-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-5-ylmethyl) ester;

7-Hydroxymethyl-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(2,4-Dioxo-thiazolidin-3-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(1,3-Dioxo-1,3-dihydro-isoindol-2-yloxymethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(4-Hydroxy-1,3-dioxo-1,3-dihydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(5-Methoxy-1,3-dioxo-1,3-dihydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(5,7-Dioxo-5,7-dihydro-[1,3]dioxolo[4,5-f]isoindol-6-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(((Benzo[1,3]dioxole carbonyl)amino)methyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(3-(2,4-Dimethoxy-phenyl)ureidomethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

2-(Oxalyl-amino)-5-phenylcarbamoyl-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-Benzylcarbamoyl-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

2-(Oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3,7-dicarboxylic acid 7-ethyl ester;

7-Benzylcarbamoyl-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-((2-(4-Methanesulfonyl-phenyl)-acetylamino)-methyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

2-((3-Carboxy-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-5-ylmethyl)-carbamoyl)nicotinic acid;

7-(2,4-Dioxo-5-pyridin-2-ylmethylene-thiazolidin-3-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(2,4-Dioxo-5-pyridin ylmethyl-thiazolidin-3-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(5-(4-Methoxy-benzylidene)-2,4-dioxo-thiazolidin-3-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(5-(4-Acetylamino-benzylidene)-2,4-dioxo-thiazolidin-3-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(5-(3,5-Dimethoxy-benzylidene)-2,4-dioxo-thiazolidin-3-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-[5-(1 H-Imidazol-4(5)-ylmethylene)-2,4-dioxo-thiazolidin-3-ylmethyl]-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(1,3-Dioxo-4,7-epoxido-1,3,4,5,6,7-hexahydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(((2R) Amino-3-phenyl-propionylamino)methyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-((2-Acetylamino-3-(4-hydroxy-phenyl)-propionylamino)methyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-((2-Acetylamino-3-methyl-butyrylamino)methyl)-3-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

2-(Oxalyl-amino)-7-(1,1,3-trioxo-1,3-dihydro-1H-benzo[d]isothiazol-2-ylmethyl)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

2-(Oxalyl-amino)-7-(1,1,3-trioxo-1H-benzo[d]isothiazol-3-yloxomethyl)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

2-(Oxalyl-amino)-7-(3-oxo-3H-benzo[d]isoxazol-2-ylmethyl)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

2-(Oxalyl-amino)-7-(1,1,3-trioxo-5-phenyl-1,3-dihydro-isothiazol-2-ylmethyl)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(1 1-Dioxo-5-phenyl-1H-isothiazol-3-yloxymethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

2-(Oxalyl-amino)-5-(1,1,3-trioxo-5-phenyl-1,3-dihydro-isothiazol-2-ylmethyl)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(1,1-Dioxo-5-phenyl-1H-isothiazol-3-yloxymethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(6-Chloro-1,1,3-trioxo-2,3-dihydro-4H-thieno[3,2-e]-1,2,4-thiadiazin-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(6-Chloro-1,1-dioxo-4H-thieno[3,2-e]-1,2,4-thiadiazine-3-yloxymethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

7-(1,3-Dioxo-1,3-dihydro-benzo[d]isothiazol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran carboxylic acid;

5-(1,3-Dioxo-1,3-dihydro-benzo[d]isothiazol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(5-Benzyl-l,1-dioxo-[1,2,5]thiadiazolidin-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(5-Ethyl-1,1-dioxo-[1,2,5]thiadiazolidin-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

2-(Oxalyl-amino)-7-(l-oxo-1,3-dihydro-isoindol-2-ylmethyl)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

2-(Oxalyl-amino)-5-(2,2,2-trifluoro-acetoxymethyl)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(((Benzo[l ,3]dioxol-5-ylmethyl)-amino)methyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-((2-Methoxy-benzylamino)methyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

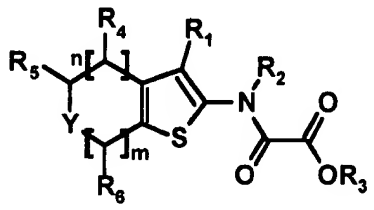
5-((2-Benzo[l 3]dioxol yl-acetylamino)methyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(((5-Methoxy-2-rnethyl-1 H-indol-3-carbonyl)amino)methyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

5-(1,3-Dioxo-5-propylcarbamoyl-1,3-dihydro-isoindol-2-ylmethyl)-2-(oxalyl-amino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid;

or a salt thereof with a pharmaceutically acceptable acid or base, or any optical isomer ormixture of optical isomers, including a racemic mixture, or any tautomeric form, or prodrug thereof.

220. (new) A compound of Formula 1



Formula 1

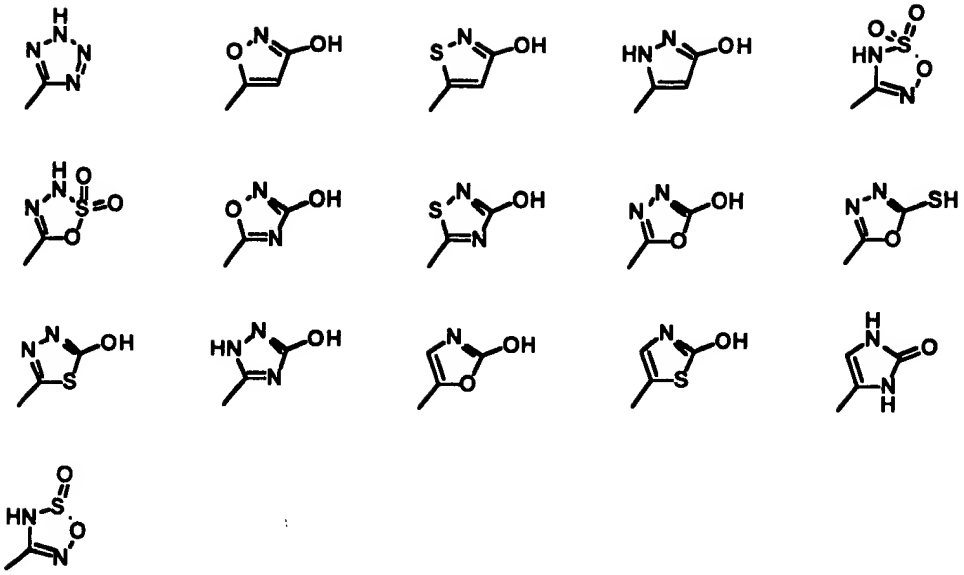
wherein

n is 1 or 2;

m is 1 or 2;

Y is O, S, SO or SO_2;

R_1 is COOH, $COOC_1$-C_6alkyl, $COOarylC_1$-C_6alkyl, $COOC_1$-C_6alkylcarbonyloxyC_1-C_6alkyl, $COOC_1$-C_6alkylcarbonyloxyarylC_1-C_6alkyl or a 5-membered heterocycles selected from the group consisting of:



R_2 is hydrogen;

R_3 is hydrogen, C_1-C_6alkyl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyloxyC_1-C_6alkyl or C_1-C_6alkylcarbonyloxyarylC_1-C_6alkyl;

R_4 is hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined below;

R_5, is hydrogen, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxycarbonyl, aryloxycarbonyl, arylC_1-C_6alkyloxycarbonyl, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxyC_1-C_6alkyl, arylC_1-C_6alkyloxyC_1-C_6-alkyl, NR_7R_8, C_1-C_6alkylaminoC_1-C_6alkyl, arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxyC_1-C_6alkyl, C_1-C_6alkylcarbonylamino, C_1-C_6alkylcarbonyl-aminoC_1-C_6alkyl, -carbonylNR_8C_1-C_6alkylCOR_{10}, wherein R_{10} is NR_7R_8, or C_1-C_6alkylNR_7R_8, arylC_1-C_6alkylcarbonylamino, arylC_1-C_6alkylcarbonylaminoC_1-C_6alkyl, $CONR_7R_8$, C_1-

C_6alkylCONR$_7$R$_8$ or arylaminocarbonylaminoC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined below and;

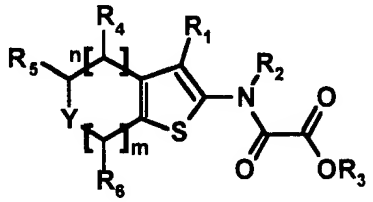
R_6 is trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxycarbonyl, aryloxycarbonyl, arylC_1-C_6alkyloxycarbonyl, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxyC_1-C_6alkyl, arylC_1-C_6alkyloxyC_1-C_6-alkyl, NR$_7$R$_8$, C_1-C_6alkylaminoC_1-C_6alkyl, arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxyC_1-C_6alkyl, C_1-C_6alkylcarbonylamino, carbonylNR$_8$$C_1$-$C_6$alkylCOR$_{10}$,wherein R_{10} is NR$_7R_8$, or C_1-C_6alkylNR$_7R_8$, arylC_1-C_6alkylcarbonylamino, arylC_1-C_6alkylcarbonylaminoC_1-C_6alkyl, CONR$_7$R$_8$, or arylaminocarbonylaminoC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined below and;

R_7 and R_8 are independently selected from hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy or arylC_1-C_6alkylcarboxy, a saturated or ~~partial~~ partially saturated cyclic 5, 6 or 7 membered amine, imide or lactam, or
R_7 and R_8 together with the nitrogen to which they are attached form a saturated, partially saturated or aromatic monocyclic, bicyclic or tricyclic ring system containing from 3 to 14 carbon atoms and from 0 to 3 additional heteroatoms selected from nitrogen, oxygen or sulphur, wherein the ring system is optionally substituted with at least one C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, C_1-C_6alkyloxy, C_1-C_6-alkyloxyC_1-C_6alkyl, C_1-C_6alkyl-aminoC_1-C_6alkyl or NR$_{11}$R$_{12}$, wherein R_{11} and R_{12} are independently selected from hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyl, arylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy or arylC_1-C_6alkylcarboxy; wherein the alkyl and aryl groups are optionally substituted as defined below,
wherein the optionally substituted alkyl groups are substituted with one or more groups independently selected from halo, cyano, nitro, trihalomethyl, carbamoyl, hydroxy, oxo,

$COOR_3$,C_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy, C_1-C_6alkylamino, arylamino, arylC_1-C_6alkylamino, di(arylC_1-C_6alkyl)amino, C_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy, arylcarboxy, arylC_1-C_6alkylcarboxy, C_1-C_6alkylcarbonylamino, -C_1-C_6alkylaminoCOR$_{13}$, wherein R_{13} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy, arylC_1-C_6alkylcarbonylamino, tetrahydrofuranyl, morpholinyl, piperazinyl, or a saturated or ~~partial~~ partially saturated cyclic 5, 6 or 7 membered amine, imide or lactam;

and wherein the optionally substituted aryl group is substituted with a group selected from halo, nitro, cyano, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxy, arylC_1-C_6alkyloxy, arylC_1-C_6alkyloxyC_1-C_6alkyl, C_1-C_6alkylamino, C_1-C_6alkylaminoC_1-C_6alkyl, arylamino, arylC_1-C_6alkylamino, arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxy, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxy, arylC_1-C_6alkylcarboxyC_1-C_6alkyl, C_1-C_6alkylcarbonylamino, C_1-C_6alkylcarbonylaminoC_1-C_6alkyl, arylC_1-C_6alkylcarbonylamino, arylC_1-C_6-alkylcarbonylaminoC_1-C_6alkyl.

221. (new) A compound of Formula 1



Formula 1

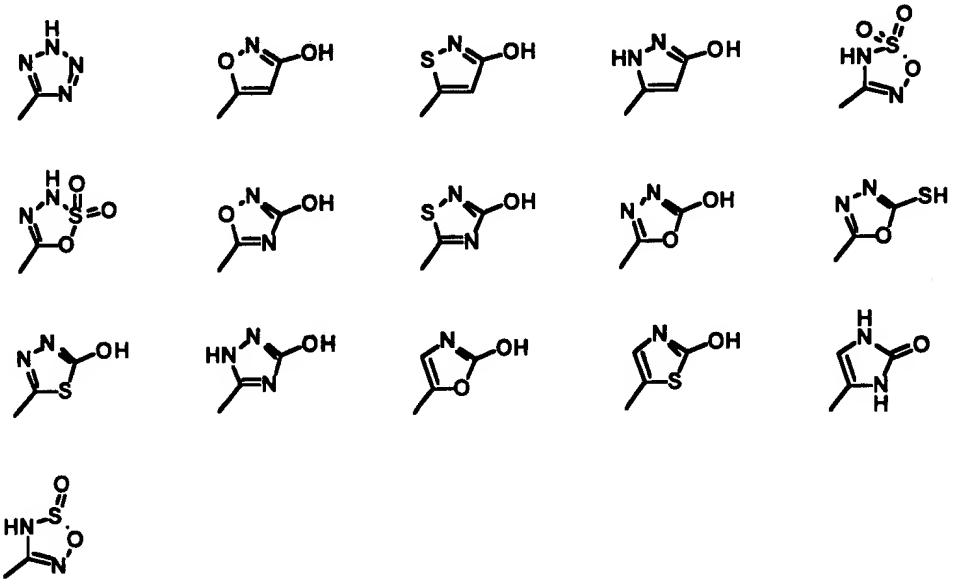
wherein

n is 1 or 2;

m is 1 or 2;

Y is O, S, SO or SO_2;

R_1 is COOH, $COOC_1$-C_6alkyl, $COOarylC_1$-C_6alkyl, $COOC_1$-C_6alkylcarbonyloxyC_1-C_6alkyl, $COOC_1$-C_6alkylcarbonyloxyarylC_1-C_6alkyl or a 5-membered heterocycles selected from the group consisting of:



R_2 is hydrogen;

R_3 is hydrogen, C_1-C_6alkyl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyloxyC_1-C_6alkyl or C_1-C_6alkylcarbonyloxyarylC_1-C_6alkyl;

R_4 is hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined below;

R_5, is trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxycarbonyl, aryloxycarbonyl, arylC_1-C_6alkyloxycarbonyl, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxyC_1-C_6alkyl, arylC_1-C_6alkyloxyC_1-C_6-alkyl, NR_7R_8, C_1-C_6alkylaminoC_1-C_6alkyl, arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl,

C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxyC_1-C_6alkyl, C_1-C_6alkylcarbonylamino, C_1-C_6alkylcarbonyl-aminoC_1-C_6alkyl, -carbonylNR_8C_1-C_6alkylCOR_{10}, wherein R_{10} is NR_7R_8, or C_1-C_6alkylNR_7R_8, arylC_1-C_6alkylcarbonylamino, arylC_1-C_6alkylcarbonylaminoC_1-C_6alkyl, $CONR_7R_8$, C_1-C_6alkyl$CONR_7R_8$ or arylaminocarbonylaminoC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined below and;

R_6 is hydrogen, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxycarbonyl, aryloxycarbonyl, arylC_1-C_6alkyloxycarbonyl, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxyC_1-C_6alkyl, arylC_1-C_6alkyloxyC_1-C_6-alkyl, NR_7R_8, C_1-C_6alkylaminoC_1-C_6alkyl, arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxyC_1-C_6alkyl, C_1-C_6alkylcarbonylamino, carbonylNR_8C_1-C_6alkylCOR_{10},wherein R_{10} is NR_7R_8, or C_1-C_6alkylNR_7R_8, arylC_1-C_6alkylcarbonylamino, arylC_1-C_6alkylcarbonylaminoC_1-C_6alkyl, $CONR_7R_8$, or arylaminocarbonylaminoC_1-C_6alkyl; wherein the alkyl and aryl groups are optionally substituted as defined below and;

R_7 and R_8 are independently selected from hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy or arylC_1-C_6alkylcarboxy, a saturated or ~~partial~~ partially saturated cyclic 5, 6 or 7 membered amine, imide or lactam, or
R_7 and R_8 together with the nitrogen to which they are attached form a saturated, partially saturated or aromatic monocyclic, bicyclic or tricyclic ring system containing from 3 to 14 carbon atoms and from 0 to 3 additional heteroatoms selected from nitrogen, oxygen or sulphur, wherein the ring system is optionally substituted with at least one C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, C_1-C_6alkyloxy, C_1-C_6-alkyloxyC_1-C_6alkyl, C_1-C_6alkyl-aminoC_1-C_6alkyl or $NR_{11}R_{12}$, wherein R_{11} and R_{12} are independently selected from

hydrogen, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkylcarbonyl, arylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy or arylC_1-C_6alkylcarboxy; wherein the alkyl and aryl groups are optionally substituted as defined below,

wherein the optionally substituted alkyl groups are substituted with one or more groups independently selected from halo, cyano, nitro, trihalomethyl, carbamoyl, hydroxy, oxo, $COOR_3$,C_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy, C_1-C_6alkylamino, arylamino, arylC_1-C_6alkylamino, di(arylC_1-C_6alkyl)amino, C_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonyl, C_1-C_6alkylcarboxy, arylcarboxy, arylC_1-C_6alkylcarboxy, C_1-C_6alkylcarbonylamino, -C_1-C_6alkylaminoCOR$_{13}$, wherein R_{13} is C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, C_1-C_6alkyloxy, aryloxy, arylC_1-C_6alkyloxy, arylC_1-C_6alkylcarbonylamino, tetrahydrofuranyl, morpholinyl, piperazinyl, or a saturated or ~~partial~~ partially saturated cyclic 5, 6 or 7 membered amine, imide or lactam;

and wherein the optionally substituted aryl group is substituted with a group selected from halo, nitro, cyano, trihalomethyl, C_1-C_6alkyl, aryl, arylC_1-C_6alkyl, hydroxy, C_1-C_6alkyloxy, C_1-C_6alkyloxyC_1-C_6alkyl, aryloxy, arylC_1-C_6alkyloxy, arylC_1-C_6alkyloxyC_1-C_6alkyl, ~~C_1-C_6alkylamino, C_1-C_6alkylaminoC_1-C_6alkyl, arylamino, arylC_1-C_6alkylamino,~~ arylC_1-C_6alkylaminoC_1-C_6alkyl, di(arylC_1-C_6alkyl)aminoC_1-C_6alkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylcarbonylC_1-C_6alkyl, arylC_1-C_6alkylcarbonyl, arylC_1-C_6alkylcarbonylC_1-C_6alkyl, C_1-C_6alkylcarboxy, C_1-C_6alkylcarboxyC_1-C_6alkyl, arylC_1-C_6alkylcarboxy, arylC_1-C_6alkylcarboxyC_1-C_6alkyl, C_1-C_6alkylcarbonylamino, C_1-C_6alkylcarbonylaminoC_1-C_6alkyl, arylC_1-C_6alkylcarbonylamino, arylC_1-C_6-alkylcarbonylaminoC_1-C_6alkyl.